	Α	В	С	D E	F	G	Н		J	K		L	
1				Background Statistic	s for Data	Sets with	Non-Dete	cts					
2	Us	User Selected Options											
3	Date/Ti	me of Cor	mputation	7/30/2013 10:36:37 A	M								
4			From File	WorkSheet.xls									
5		Full	Precision	OFF									
6	Cor	fidence C	Coefficient	95%									
7		(Coverage	95%									
8	rent or Fut	ure K Obs	ervations	1									
9	mber of Bo	nber of Bootstrap Operations 2000											
10													
11	Chlordane	Chlordane											
12													
13		General Statistics											
14	Total Number of Observations 66 Number of Missing Observations 0										0		
15			Number of	Distinct Observations	59								
16				Number of Detects	32			Nι	umber of Nor	n-Detects	3	34	
17			Numl	per of Distinct Detects	32			Number of	f Distinct Nor	n-Detects	2	27	
18				Minimum Detect	0.117				Minimum No	on-Detect	(0.0438	
19				Maximum Detect	0.825			I	Maximum No	on-Detect		0.91	
20				Variance Detected	0.0289		Percent Non-Detects 51.5						
21				Mean Detected	0.445					Detected		0.17	
22			Mean of D	Detected Logged Data	-0.891			SD of D	Detected Log	ged Data		0.44	
23													
24				Critical Values for	Backgrou	nd Thresh	old Values	(BTVs)					
25			Tolerand	ce Factor K (For UTL)	1.997				d2max	(for USL)		3.062	
26													
27					GOF Tes	t on Detec							
28				oiro Wilk Test Statistic	0.956				lk GOF Tes				
29			-	oiro Wilk Critical Value	0.93	Detected Data appear Normal at 5% Significance Level							
30				Lilliefors Test Statistic	0.134								
31			5% l	_illiefors Critical Value	0.157				mal at 5% Si	gnificance	: Lev	vel	
32		Detected Data appear Normal at 5% Significance Level											
33													
34			Кар	lan Meier (KM) Backg		tistics Ass	uming Nor	mai Distrit	oution	0.0		0.040	
35			05	Mean	0.295				050/ 1/1	SD		0.218	
36				% UTL95% Coverage	0.731							0.662	
37				90% KM Percentile (z)	0.575	· /						0.654	
38				39 % Kivi Fercerille (2)	0.803				95 /0	NIVI USL		0.903	
39			וח	/2 Substitution Backer	ound Stati	etice Aeeı	ımina Norr	nal Dietrih	ution				
40			DL/2 Substitution Background Statistics Assuming Normal Distribution										
41				Meanl	0.306		anning Non			SD			
42			95	Mean	0.306		anning Non		959	SD % LIPL (t)		0.197	
			95	% UTL95% Coverage	0.699		anning 14011			% UPL (t)		0.637	
43			95	% UTL95% Coverage 90% Percentile (z)	0.699 0.558		anning 14011		95% Perd			0.637 0.629	
44		DL		% UTL95% Coverage 90% Percentile (z) 99% Percentile (z)	0.699 0.558 0.763	ovided for			95% Pero	% UPL (t) centile (z) 95% USL		0.637	
44 45		DL		% UTL95% Coverage 90% Percentile (z)	0.699 0.558 0.763	ovided for			95% Pero	% UPL (t) centile (z) 95% USL		0.637 0.629	
44 45 46		DL		% UTL95% Coverage 90% Percentile (z) 99% Percentile (z) recommended method	0.699 0.558 0.763 d. DL/2 pro		compariso	ns and his	95% Pero	% UPL (t) centile (z) 95% USL		0.637 0.629	
44 45 46 47		DL		% UTL95% Coverage 90% Percentile (z) 99% Percentile (z)	0.699 0.558 0.763 d. DL/2 pro		compariso	ns and his	95% Pero	% UPL (t) centile (z) 95% USL ons		0.637 0.629	
44 45 46 47 48		DL	/2 is not a	% UTL95% Coverage 90% Percentile (z) 99% Percentile (z) recommended method	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659	etected Ob	compariso pservations And	ns and his s Only derson-Da	95% Pero	% UPL (t) centile (z) 95% USL ons		0.637 0.629 0.908	
44 45 46 47 48 49		DL	/2 is not a	% UTL95% Coverage 90% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659	etected Ob	compariso pservations And ata appear	ns and his s Only derson-Da Gamma D	95% Pero	% UPL (t) centile (z) 95% USL ons est 5% Signif		0.637 0.629 0.908	
44 45 46 47 48 49 50		DL	/2 is not a	90% Percentile (z) 99% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic 5% A-D Critical Value	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659 0.747 0.147	etected Objected da	compariso servations And ata appear	ns and his s Only derson-Da Gamma D olmogrov-S	95% Pero storical reaso rling GOF To	% UPL (t) centile (z) 95% USL ons fest 5% Signif	ican	0.637 0.629 0.908	
44 45 46 47 48 49 50 51		DL	/2 is not a	90% Percentile (z) 99% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic 5% A-D Critical Value K-S Test Statistic	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659 0.747 0.147 0.156	etected da	compariso servations And ata appear Ko ata appear	ns and his S Only Gerson-Da Gamma D Dolmogrov-S Gamma D	95% Pero torical reaso rling GOF To istributed at Smirnoff GO istributed at	% UPL (t) centile (z) 95% USL ons fest 5% Signif	ican	0.637 0.629 0.908	
44 45 46 47 48 49 50		DL	/2 is not a	90% Percentile (z) 99% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic 5% A-D Critical Value K-S Test Statistic 5% K-S Critical Value	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659 0.747 0.147 0.156	etected da	compariso servations And ata appear Ko ata appear	ns and his S Only Gerson-Da Gamma D Dolmogrov-S Gamma D	95% Pero torical reaso rling GOF To istributed at Smirnoff GO istributed at	% UPL (t) centile (z) 95% USL ons fest 5% Signif	ican	0.637 0.629 0.908	
44 45 46 47 48 49 50 51 52		DL	/2 is not a	90% Percentile (z) 99% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic 5% A-D Critical Value K-S Test Statistic 5% K-S Critical Value	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659 0.747 0.147 0.156	etected Ob etected da etected da stributed a	compariso pservations And ata appear Ko ata appear at 5% Signi	ns and his s Only derson-Da Gamma D olmogrov-s Gamma D ficance Le	95% Pero torical reaso rling GOF To istributed at Smirnoff GO istributed at	% UPL (t) centile (z) 95% USL ons fest 5% Signif	ican	0.637 0.629 0.908	
44 45 46 47 48 49 50 51 52 53		DL	/2 is not a	90% Percentile (z) 99% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic 5% A-D Critical Value K-S Test Statistic 5% K-S Critical Value etected data appear C	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659 0.747 0.147 0.156	etected Ob etected da etected da stributed a	compariso pservations And ata appear Ko ata appear at 5% Signi	ns and his s Only derson-Da Gamma D olmogrov-S Gamma D ficance Le	95% Pero torical reaso rling GOF To istributed at Smirnoff GO istributed at	% UPL (t) centile (z) 95% USL ons est 5% Signif 5% Signif	iican	0.637 0.629 0.908	
44 45 46 47 48 49 50 51 52 53		DL	/2 is not a	90% Percentile (z) 99% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic 5% A-D Critical Value K-S Test Statistic 5% K-S Critical Value etected data appear C	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659 0.747 0.147 0.156 Gamma Dis	etected Ob etected da etected da stributed a	compariso pservations And ata appear Ko ata appear at 5% Signi	ns and his s Only derson-Da Gamma D blmogrov-S Gamma D ficance Le	95% Pero storical reaso rling GOF T istributed at Smirnoff GO istributed at	w UPL (t) centile (z) 95% USL ons est 5% Signif 5% Signif	iican	0.637 0.629 0.908 ce Lev	
44 45 46 47 48 49 50 51 52 53 54 55		DL	/2 is not a	90% Percentile (z) 99% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic 5% A-D Critical Value K-S Test Statistic 5% K-S Critical Value etected data appear C Gamma S k hat (MLE) Theta hat (MLE) nu hat (MLE)	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659 0.747 0.147 0.156 Gamma Dis tatistics on 6.224	etected Ob etected da etected da stributed a	compariso pservations And ata appear Ko ata appear at 5% Signi	ns and his s Only derson-Da Gamma D olmogrov-s Gamma D ficance Le	95% Pero itorical reaso rling GOF T istributed at Smirnoff GO istributed at evel (bias correct	W UPL (t) centile (z) 95% USL ons Fest 5% Signif 5% Signif cted MLE) cted MLE)	iican	0.637 0.629 0.908 ce Lev	
44 45 46 47 48 49 50 51 52 53 54 55		DL	J2 is not a	90% Percentile (z) 99% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic 5% A-D Critical Value K-S Test Statistic 5% K-S Critical Value etected data appear C Gamma S k hat (MLE) Theta hat (MLE) nu hat (MLE) Mean (bias corrected)	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659 0.747 0.147 0.156 Gamma Dis tatistics on 6.224 0.0716	etected Ob etected da etected da stributed a	compariso pservations And ata appear Ko ata appear at 5% Signi	ns and his s Only derson-Da Gamma D olmogrov-s Gamma D ficance Le k star Theta star	95% Pero	% UPL (t) centile (z) 95% USL ons fest 5% Signif F 5% Signif cted MLE) corrected)	iicano ((366	0.637 0.629 0.908 ce Lev ce Lev 5.661	
44 45 46 47 48 49 50 51 52 53 54 55 56 57		DL	J2 is not a	90% Percentile (z) 99% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic 5% A-D Critical Value K-S Test Statistic 5% K-S Critical Value etected data appear C Gamma S k hat (MLE) Theta hat (MLE) nu hat (MLE)	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659 0.747 0.147 0.156 camma Dis tatistics on 6.224 0.0716 398.3	etected Ob etected da etected da stributed a	compariso pservations And ata appear Ko ata appear at 5% Signi	ns and his s Only derson-Da Gamma D olmogrov-s Gamma D ficance Le k star Theta star	95% Pero	% UPL (t) centile (z) 95% USL ons fest 5% Signif F 5% Signif cted MLE) corrected)	iicano ((366	0.637 0.629 0.908 ce Lev ce Lev 5.661	
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58		DL	J2 is not a	90% Percentile (z) 99% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic 5% A-D Critical Value K-S Test Statistic 5% K-S Critical Value etected data appear C Gamma Si k hat (MLE) Theta hat (MLE) nu hat (MLE) Mean (bias corrected) E Sd (bias corrected)	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659 0.747 0.147 0.156 Gamma Dis tatistics on 6.224 0.0716 398.3 0.445 0.187	etected Ob etected da etected da stributed a	compariso pservations And ata appear Ko ata appear at 5% Signi	ns and his s Only derson-Da Gamma D blmogrov-S Gamma D ficance Le k star Theta star nt	95% Pero	% UPL (t) centile (z) 95% USL ons fest 5% Signif F 5% Signif cted MLE) corrected)	iicano ((366	0.637 0.629 0.908 ce Lev ce Lev 5.661 0.0787 62.3	
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58			/2 is not a D MLE I	90% Percentile (z) 99% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic 5% A-D Critical Value K-S Test Statistic 5% K-S Critical Value etected data appear C Gamma S k hat (MLE) Theta hat (MLE) nu hat (MLE) Mean (bias corrected) E Sd (bias corrected)	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659 0.747 0.147 0.156 Gamma Dis tatistics on 6.224 0.0716 398.3 0.445 0.187	etected Observed detected destributed as Detected	compariso pservations And ata appear At 5% Signi Data Only	ns and his s Only derson-Da Gamma D blmogrov-S Gamma D ficance Le k star Theta star nu 5% Percer	95% Pero	W UPL (t) centile (z) 95% USL ons est 5% Signif 5% Signif cted MLE) cted MLE) corrected)	iicano ((366	0.637 0.629 0.908 ce Lev ce Lev 5.661 0.0787 62.3	
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60			/2 is not a D MLE I	90% Percentile (z) 99% Percentile (z) 99% Percentile (z) recommended method Gamma GOF T A-D Test Statistic 5% A-D Critical Value K-S Test Statistic 5% K-S Critical Value etected data appear C Gamma Si k hat (MLE) Theta hat (MLE) nu hat (MLE) Mean (bias corrected) E Sd (bias corrected)	0.699 0.558 0.763 d. DL/2 pro ests on De 0.659 0.747 0.147 0.156 Gamma Dis tatistics on 6.224 0.0716 398.3 0.445 0.187	etected Observed detected destributed as Detected	compariso pservations And ata appear At 5% Signi Data Only	ns and his s Only derson-Da Gamma D blmogrov-S Gamma D ficance Le k star Theta star nu 5% Percer	95% Pero	W UPL (t) centile (z) 95% USL ons est 5% Signif 5% Signif cted MLE) cted MLE) corrected)	iicano ((366	0.637 0.629 0.908 ce Lev ce Lev 5.661 0.0787 62.3	

	Α	В	С	D	E	F	G	Н	I	J	K	L	
63				S may not									
64				situations,									
65	For	gamma dis	stributed de	tected data	, BTVs and	d UCLs ma	y be comp	uted using	gamma d	istribution o	n KM estim	nates	
66	Minimum					0.117		0.325					
67	Maximum					0.825		0.292					
68	SD				0.174		0.537						
69	k hat (MLE)					3.758		3.597					
70		Theta hat (MLE)				0.0865			Theta star	(bias corre	cted MLE)	0.0904	
71	nu hat (MLE)				496				u star (bias		474.8		
72	MLE Mean (bias corrected)				0.325			ML	E Sd (bias	corrected)	0.171		
73		ç	5% Percen		. ,	14.35				90%	Percentile	0.555	
74		95% Percentile									Percentile	0.849	
75	The following statistics are computed using Gamma ROS Statistics on Imputed Data Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods												
76			Upper	Limits usir			H) and Ha	wkins Wixl	ey (HW) N	/lethods		1	
77					WH	HW					WH	HW	
78	Approx. G	iamma UT	L with 95%	_	0.741	0.757		95%	Approx. G	amma UPL	0.653	0.661	
79			95% Ga	ımma USL	1.1	1.161							
80													
81	The following statistics are computed using gamma distribution and KM estimates Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods												
82			Upper		~		H) and Ha	wkins Wixi	ey (HW) N		L (IZNA)	0.40	
83					k hat (KM)	1.833				n	u hat (KM)	242	
84	Approx	omma IIT	T with OFO	Covers	WH 1	HW 1.085		050/	Anness	omma l IDi	WH 0.827	HW 0.876	
85	Approx. G	iamma U i	L with 95%	mma USL				95%	Approx. G	amma UPL	0.827	0.876	
86			95% Ga	ımma USL	1.763	2.078							
87				Lama		Tool on D	ataata d O	h	- Onb.				
88			Chan		ormal GOF	0.914	etected O			IIL COE To	nt .		
89	Shapiro Wilk Test Statistic					0.914	Г	Shapiro Wilk GOF Test Data Not Lognormal at 5% Significance Leve					
90	5% Shapiro Wilk Critical Value Lilliefors Test Statistic				0.93	L	CI .						
91				illiefors Cri		0.173							
92			370 L		ata Not Lo					it 5 % Olgilli	icance Levi	Ci	
93 94						gnomara	. 0 /0 Olgilli	iodiloc Lo	701				
95		Backgro	und Logno	rmal ROS	Statistics A	Assumina I	Lognormal	Distributio	n Usina lı	nputed No	n-Detects		
96			-	lean in Orig		0.329					Log Scale	-1.232	
97					jinal Scale	0.169		0.486					
98			95%	6 UTL95%		0.77		0.762					
99		95% B	ootstrap (%) UTL95%	Coverage	0.788		0.661					
100	95% Bootstrap (%) UTL95% Coverage 90% Percentile (z)					0.544		0.649					
101	200/ 5 /					0.904		1.294					
102													
103	1			Backgrou	nd DL/2 St	atistics As	suming Lo	gnormal D	istribution	1			
104						0.306		-1.482					
105					0.197		0.902						
106	95% UTL95% Coverage				1.377	95% UPL (t)							
107	1				rcentile (z)	0.722	95% Percentile (z)						
108	99% Percentile (z)						95% USL						
109		DL/:	2 is not a R	ecommen	ded Metho	d. DL/2 pro	ovided for	compariso	ns and his	storical reas	sons.		
110													
111				-	rametric D			-					
112			Data	appear to	follow a D	iscernible	Distribution	n at 5% Sig	gnificance	Level			
113													
114	Nonparametric Uppper Limits for BTVs(no distinction made between detects and nondetects)												
115					Statistic, r	65				TL with95%		0.825 0.848	
116					1.711								
117	95% UPL 95% KM Chebyshev UPL				0.751								
118			95%	KM Cheby	snev UPL	1.253							
119		N						1					
120													
121	data set free of outliers and consists of observations collected from clean unimpacted locations.												
122	The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.												
		represent	s a backgro	ouna data s	et and whe	n many or	isite obser	vations nee	ea to be co	impared wit	π της ΒΙV.		
123 124													